

MicroBooNE Detector Assembly and Experiment Update

All Experimenters Meeting

April 1st, 2013

Ryan A. Grosso
University of Cincinnati
On behalf of the MicroBooNE Collaboration

MicroBooNE (E-974)

- Liquid Argon Time Projection Chamber (LAr TPC)
 - 170 tons LAr (~84t active)
 - Located in Booster Neutrino Beamline (BNB)



Last Report (Fall '12)

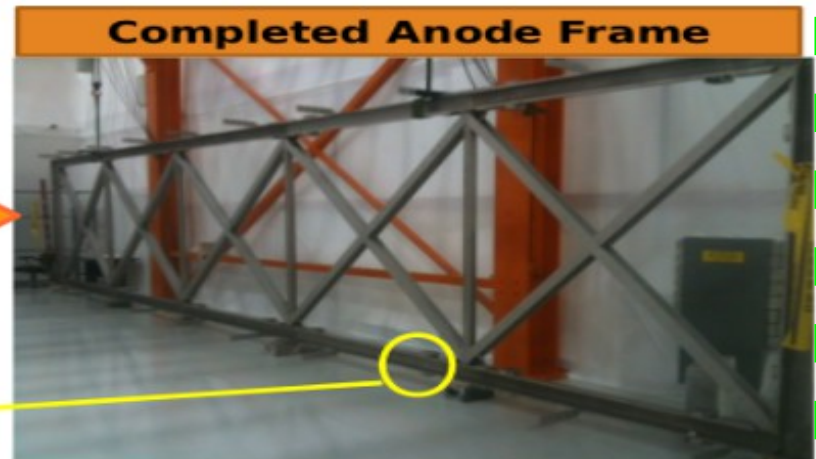
Assembly Activity at DØ Assembly Building



Attaching the adjusting assemblies for the wire tensioning



09/10/12

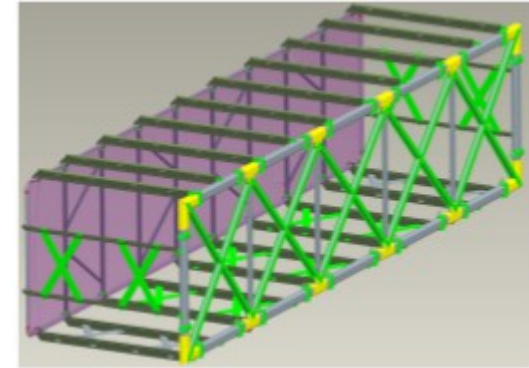


Completed Anode Frame

11

Where We Are Now

- TPC Structure Complete ★
 - Many hours of work from undergraduates, grad-students, post-docs, scientists, and technicians.
 - SPECIAL THANKS: Jen Raaf & John Voirin



From the back of the tent



Front view



- All signal wires (8000+) are at FNAL
- Ready to be installed & tensioned 😊



CRYOSTAT

- Arrived at FNAL
March 8th
- Level one milestone ★
- Thanks to Sue Duffin (BNL)



BEST BIRTHDAY GIFT EVER!!!



Tech Team

- With out our stellar technicians none of this would be possible. THANK YOU ALL! ★ ★



Bryan Johnson, Tom Olszanowski, Mark Shoun, John Voirin, John Cornele

* Not Pictured: Tim Griffin, Andrew Lathrop,
Koroush Taheri

Leak Check & Cryostat Cleaning

Roberto Acciarri

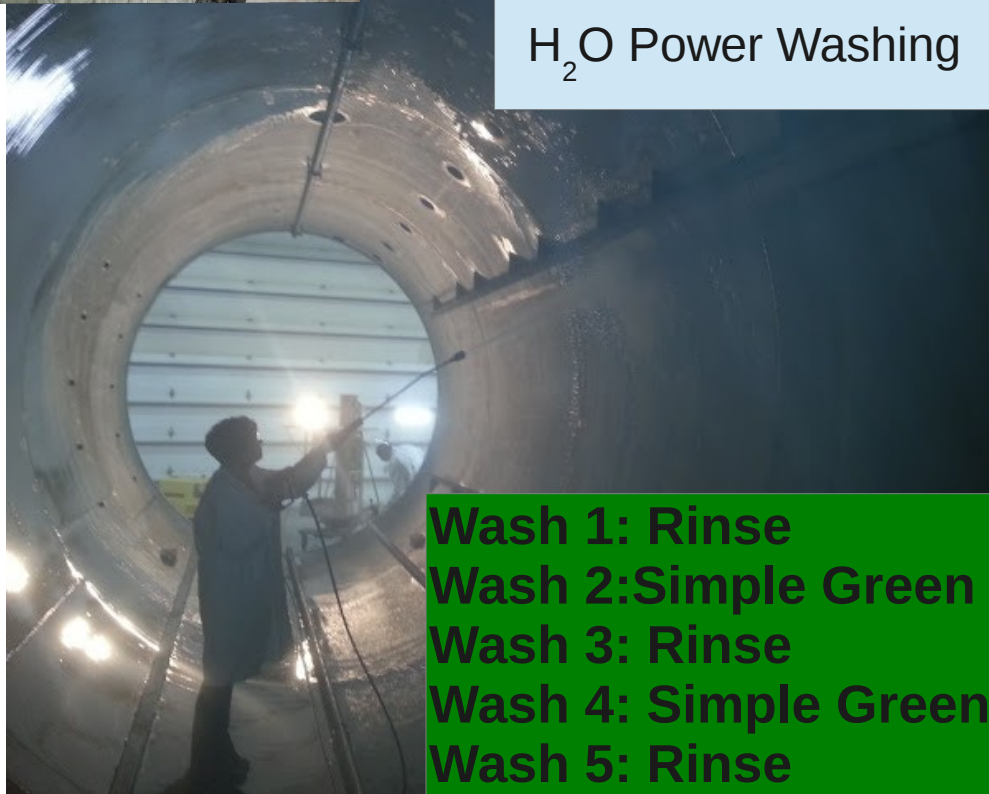


Thanks to DØ Crew
Pete Simon et al.

Leak Check

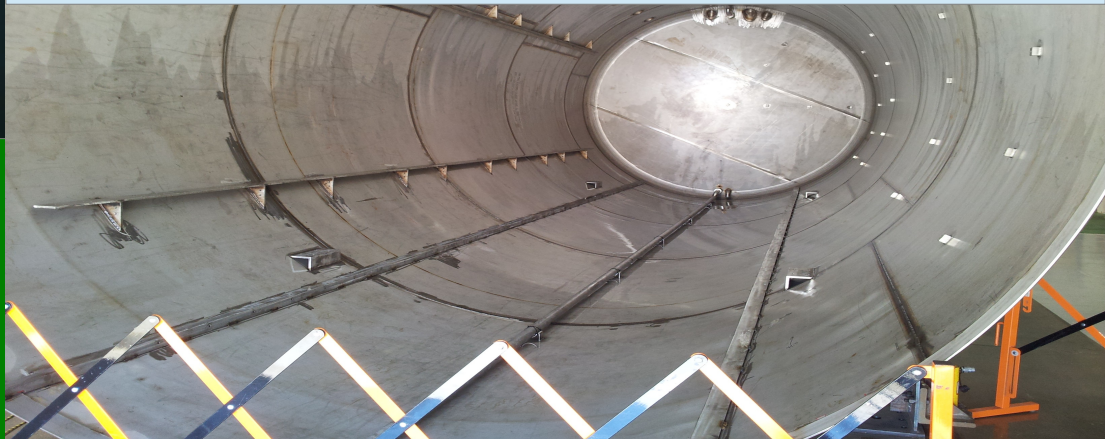


H₂O Power Washing



Wash 1: Rinse
Wash 2: Simple Green
Wash 3: Rinse
Wash 4: Simple Green
Wash 5: Rinse

All Clean!



PMT System

PMT mount with
acrylic plate for
wavelength shifter

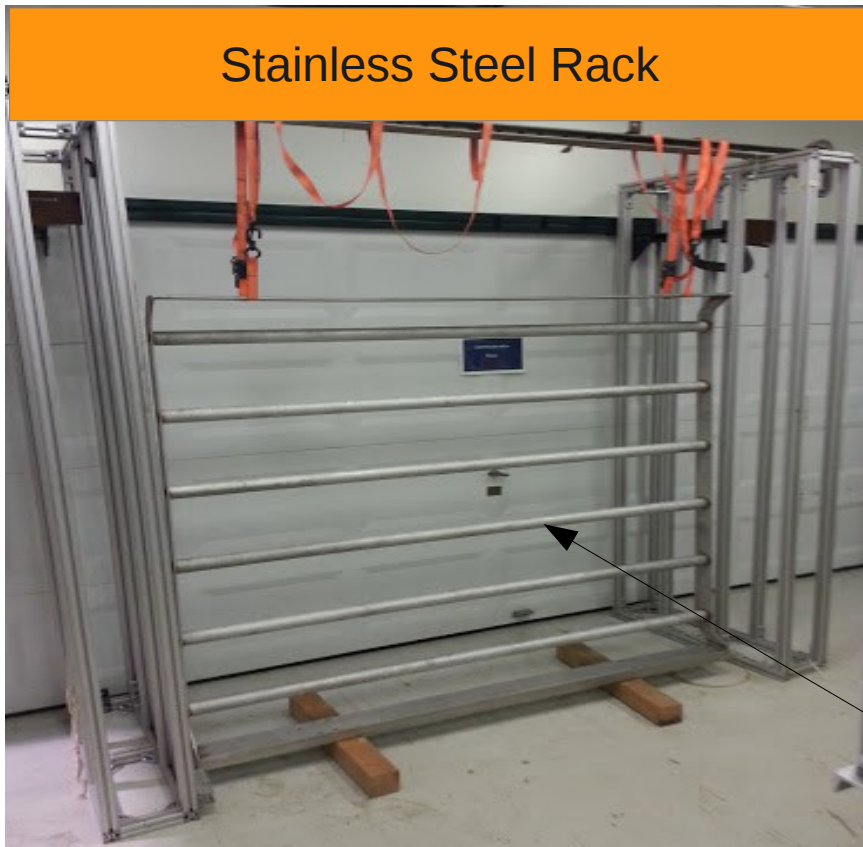


*Special Thanks to Eric James

PMT mounts look great!



Stainless Steel Rack

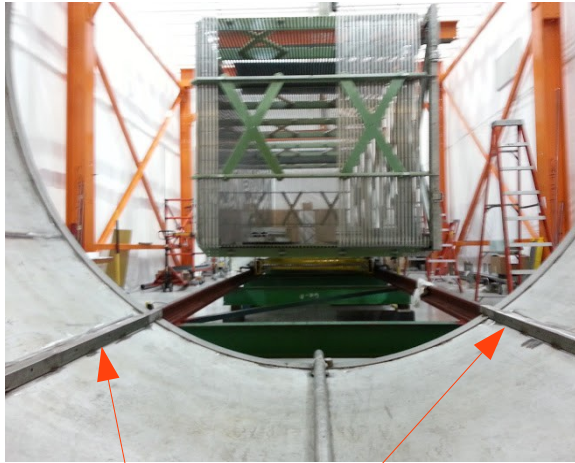


Support Rails in Cryostat



PMT racks will be at FNAL within the week!

Test Fit of TPC & PMT

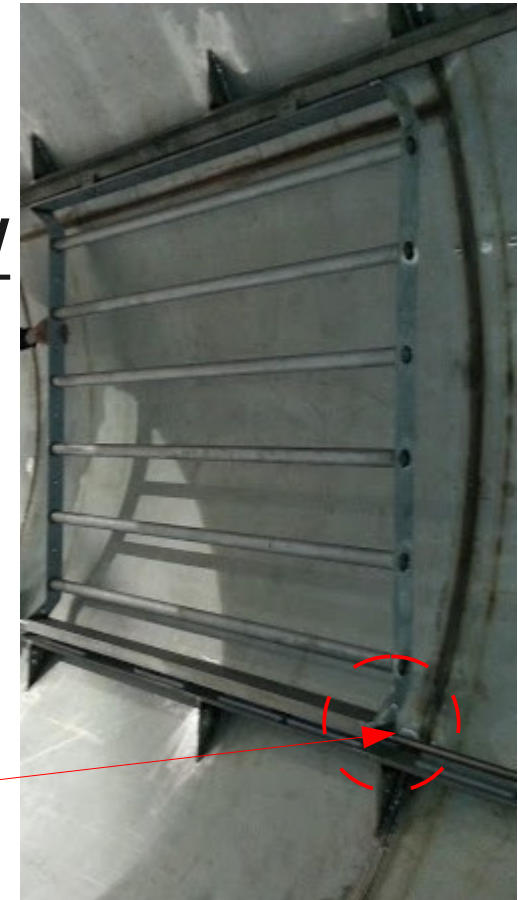


TPC cart: Load ~12,000 lbs

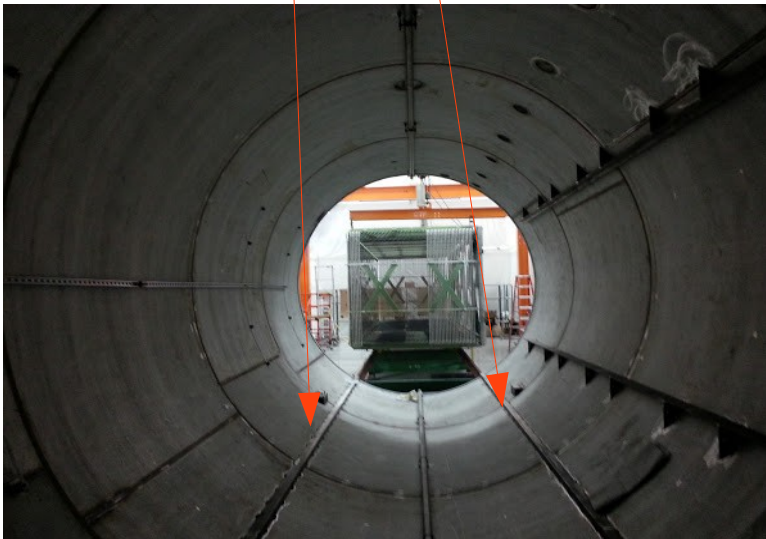
TPC Rails

TPC Test Fit Tomorrow

PMT Test Fit April 8th



Thompson Linear Bearing



LArTF



Dixon Bogert

Almost There
Beneficial Occupancy by mid-April



Electrical conduit installed

Removable Roof

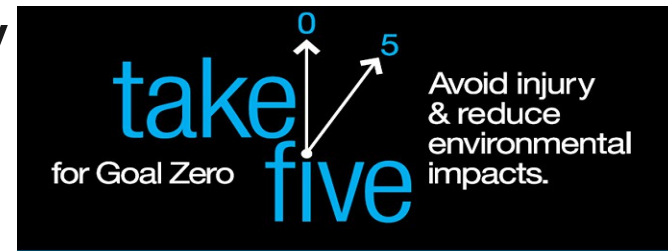


**RESERVED
PARKING**
FOR
**MicroBooNE
Detector**
ALL OTHERS WILL
BE TOWED

Upcoming Work

- Lots of activity thus far and more to go
 - MicroBooNE is committed to safety

No injuries!



- Many thanks to all the undergraduates, grad-students, post-docs, scientists, and technicians who have contributed!
- Keep an eye out for exciting update from MicroBooNE in the weeks to come.

--Please come visit

